

REMARKS

Reconsideration of the above-mentioned reissue patent application is hereby requested in view of the above amendments, additional claims, and remarks which follow.

The Examiner has also indicated that the original letters patent or an affidavit as to the loss or inaccessibility of the original patent must be received before this reissue application can be allowed. An affidavit by Assignee's Patent Counsel, Robert J. Kapalka, was supplied in a Statement as to Loss of Original Patent, signed and forwarded on March 18, 2002. A copy of the same is attached hereto for the Examiner's review.

The Examiner has also rejected Claims 19-22 under 35 U.S.C. §103(a) under a combination of four references, Roberts (U.S. Patent 3,760,334); Henschen, et al. (U.S. Patent 3,663,930) in view of Chau, et al. and Martens (U.S. Patent 4,582, 386).

Roberts (U.S. Patent 3,760,334) discloses receptacle and plug connectors including a plurality of contact elements to interconnect a plurality of cables. The two electrical connectors provide an interconnection as shown in Figures 4 and 5 to interconnect twisted pair cables 8, 10.

Henschen, et al., (U.S. Patent 3,663,930) shows disengageable connectors where one connector part has a channel shaped female pin 4 which projects out of its associated housing beyond end face 91 (see Figure 4a) to interconnect with a mating contact 2. This contact 2 includes springs 16, 18 positioned between sidewalls 22 and a forward web 12.

Martens (U.S. Patent 4,582,386) shows a connector with one or more contacts, where some contacts are enlarged to

handle larger currents. The male power contacts 41 are tab style contacts of a single thickness of material, as shown in Figures 5a, 5b.

Chau et al. shows a printed circuit board connector having a housing with a printed circuit board slot at 46. Chau et al. shows both signal 50, 52 and power 58, 58a contacts positioned on opposite sides of the slot 46. Each of the signal and power contacts are discrete contacts, that is, each contact on opposite sides of the printed circuit board slot 46 are discrete from its opposed contact in the same position. In this way, each of the contacts, particularly the power contacts, contact separate pads on opposite sides of the printed circuit board, but are not interconnected to each other.

For numerous reasons, Applicants respectfully disagree with the Examiner's rejection of claims 19-22, (Claims 27-34 are cancelled) under 35 U.S.C. §103(a).

Firstly, Applicants question the viability of the Roberts and Henschen, et al. contacts for use with power. The Examiner indicated that both Roberts and Henschen, et al. show first and second electrical connectors having first and second power contacts. Applicants can find no reference to the fact that these connector contacts are used for power, and the discussion within the patents themselves would suggest otherwise.

Roberts for example discusses in Column 7, lines 60-68, that this particular connector is used for interconnecting twisted pair conductors of telecommunications cable. Thus Figure 1 of Roberts merely shows a spliced connection of two cable ends. Nowhere are power contacts discussed.

Henschen, et al. on the other hand discusses printed daughter board connectors that are spaced apart by a distance

of 0.050 inches (column 1, line 10). Furthermore, in column 3, lines 42-46, Henschen, et al. indicates that the contact terminals in accordance with the invention are manufactured from an extremely thin stock, for example, 0.004 inches in thickness. Thus it is questionable whether such small contacts having such thin material stock could be used in a power distribution application similar to that anticipated and claimed by Applicants. Finally with respect to Henschen, et al., as shown in Figure 6, the connector is shown as having wall portion 34 being positioned against inside surface 62 of the housing (and discussed in column 4, lines 14-16); whereas power contacts cannot be supported by a housing.

Secondly, Applicants believe that there is no teaching or suggestion in any of the references for their combination. As noted in In Re Gorman, the Fed Circuit indicated that:

it is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicants' structure as a template in selecting elements from references to fill the gaps. *Interconnect Planning*, 774 Fed. 2d at 1143, 227 USPQ at 551. The references themselves must provide some teaching whereby the applicants' combination would have been obvious. 18 USPQ 2d 1885, at 1888.

As mentioned in Applicants' specification, and as supported by Applicant's claim terminology, Applicants' design provides power contacts which are profiled to accept larger currents and to enhance heat dissipation, whereas Henschen, et al. would preclude an adequate power connection and preclude heat dissipation if used for power contacts. That is, its small mass and the fact that it is in contact with an insulative material would detract from its heat dissipation capabilities. Therefore the combination of Roberts and Henschen, et al. together with Chau, et al. and Martens cannot

render Applicants invention obvious. While Chau, et al. and Martens discuss having separate signal and power contacts; there is absolutely no suggestion in any of the references to the combination of these four references. More particularly, there is no suggestion to provide the connector having both power contacts and signal contacts, where the power contacts are profiled according to claims 19-34, 38-42 and 47-54. Thus, Applicants believe that there is no motivation to the combination whatsoever.

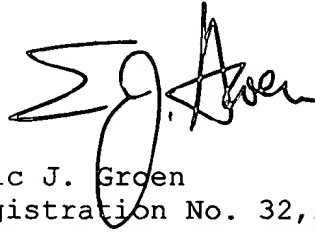
In fact, Applicants believe that the references actually teach away from their combination. Martens shows a power tab contact, together with signal contacts. Roberts shows a subminiature-D style connector assembly where all contacts are of uniform size, and are used for interconnecting telecommunications cables. Chau et al. shows a printed circuit board style connector, where opposed power and signal contacts contact printed circuit board paths on opposite sides of a printed circuit board. Finally, Henschen et al. teaches making a connector profile as small as possible, with 0.004" of material stock and on 0.050" center line spacings. Certainly, this teaching could not suggest the provision of a contact which is larger in profile than the associated signal contacts. This would be a direct contradiction to its teaching.

Notwithstanding the above-mentioned arguments, Applicants have submitted amendments for claim 19 to better clarify Applicants' invention. In claim 19, Applicants have included the limitation that the power contacts have contact fingers which extend from the body portion of the power contact in a cantilevered manner, and are unsupported at their free ends, with the bowed portions and the free ends deflectable towards each other. This allows for their

resiliency upon mating with the corresponding power contacts. Even if the references used in the rejection by the Examiner, namely the combination of Roberts, Martens, Henschen, et al. and Chau, et al. is taken, claims 19 and 30 are allowable over this combination. None of these references even in combination show a connector system having both signal and power contacts, where the power contacts are comprised of contact fingers cantilevered from a base section which are receivable in a mating power contact having opposed contact sections in a mating connector housing.

Applicants appreciate the Examiner's recognition of allowable subject matter in claims 1-18, 23-26, 38-42 and 47-54. For all the foregoing amendments and remarks, Applicants believe the pending claim 1-26, 38-42 and 47-54 are in condition for allowance and request early passage thereof.

Respectfully submitted,



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Sept 17, 2002

Date

VERSION WITH MARKINGS TO SHOW CHANGES MADE

19. (Amended) Mateable electrical connectors comprising:

a first electrical connector having an insulative housing which carries signal contacts and power contacts;

each power contact having a body portion and contact fingers extending therefrom in an [cantilevered and] opposed relationship, the contact fingers further having resiliently deflectable bowed portions, which extend in a cantilevered manner, unsupported at their free ends, with the bowed portions and the free ends deflectably movable towards each other;

a second electrical connector having an insulative housing which carries mating signal contacts and mating power contacts for mating with the signal contacts and power contacts, respectively, of the first electrical connector;

the mating power contacts receiving the contact fingers of the power contacts of the first connector therein, whereby the cantilevered contact fingers deflect inwardly upon mating.